

For Discussion Purposes Only

(Adopted TBD)

(Version 09-14-2021)

PROPOSED RULE 429.2 STARTUP AND SHUTDOWN EXEMPTION PROVISIONS FOR OXIDES OF NITROGEN FROM ELECTRICITY GENERATING FACILITIES

(a) Purpose

The purpose of this rule is to limit emissions of oxides of nitrogen (NO_x) during periods of startup and shutdown from electricity generating units at electricity generating facilities.

(b) Applicability

This rule shall apply to electricity generating units at electricity generating facilities.

(c) Definitions

For the purpose of this rule, the following definitions shall apply:

- (1) BOILER COLD START means the condition of a boiler startup occurring after a boiler has been shut down for 24 hours or more.
- (2) BOILER NON-COLD START means the condition of a boiler startup occurring after a boiler has been shut down for less than 24 hours or put in standby.
- (3) ELECTRICITY GENERATING UNIT is as defined in Rule 1135 – Emissions of Oxides of Nitrogen from Electricity Generating Facilities, which includes boilers, combined cycle/cogeneration gas turbines, duct burners, simple cycle gas turbines, and internal combustion engines, as defined in Rule 1135.
- (4) ELECTRICITY GENERATING FACILITY is as defined in Rule 1135.
- (5) MINIMUM OPERATING TEMPERATURE means the minimum operating temperature specified by the manufacturer, or as otherwise defined in the South Coast AQMD permit to operate.
- (6) OXIDES OF NITROGEN (NO_x) EMISSIONS is as defined in Rule 1135.
- (7) SCHEDULED STARTUP means a planned startup that is specified by January 1 of each year.
- (8) SHUTDOWN means the time period that begins when an electricity generating unit begins reducing load and flue gas temperatures fall below the minimum operating temperature of the NO_x post-combustion control equipment, and ends in a period of zero fuel flow.

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- (9) STABLE CONDITIONS means that the fuel flow to an electricity generating unit is consistent and allows for normal operations.
 - (10) STARTUP means the time period that begins when an electricity generating unit begins combusting fuel after a period of zero fuel flow and ends when the electricity generating unit reaches the emission limit specified in the South Coast AQMD Rule 1135 or permit to operate, whichever is more stringent, or when the time limit specified in Table 1 is reached, whichever is soonest.
- (d) Requirements
- (1) An owner or operator an electricity generating unit is not subject to the NO_x emission limits and the applicable rolling average and oxygen correction provisions pursuant to Rule 1135 during startup and shutdown.
 - (2) On and after January 1, 2024, an owner or operator of an electricity generating unit shall not exceed the startup and shutdown time allowances specified in Table 1: Startup and Shutdown Duration Limits for Electricity Generating Units or the startup and shutdown time allowances specified in the permit to operate, whichever is more stringent, when emissions from the electricity generating unit exceed the NO_x emission limits established in Rule 1135 during a startup or shutdown.

Table 1: Startup and Shutdown Duration Limits

Equipment Type	Time Allowance When Emissions Exceed Rule 1135 Emission Limits	
	Startup	Shutdown
Boiler	Boiler Cold Start: 24 hours	12 hours
	Boiler Non-Cold Start: 12 hours	
Combined Cycle/Cogeneration Gas Turbine and Associated Duct Burner	6 hours	2 hours
Simple Cycle Gas Turbine	1 hour	45 minutes
Diesel Internal Combustion Engines	1 hour	30 minutes

- (3) On and after January 1, 2024, an owner or operator of an electricity generating unit shall not allow any startup to last longer than the time that is necessary to reach stable conditions and to reach minimum operating temperature of the NO_x post-combustion control equipment, if applicable.
- (4) On and after January 1, 2024, an owner or operator of an electricity generating unit shall not exceed ten scheduled startups per calendar year for each electricity generating unit.
- (5) On and after January 1, 2024, an owner or operator of an electricity generating unit shall take all reasonable and prudent steps to minimize emissions during startup and shutdown.
- (6) On and after January 1, 2024, an owner or operator of an electricity generating unit shall install and maintain an annually calibrated temperature measuring device at the inlet of the NO_x post-combustion control equipment.
- (7) On and after January 1, 2024, an owner or operator of an electricity generating unit with NO_x post-combustion control equipment shall operate the NO_x post-

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combustion control equipment, including the injection of any associated chemical reagent(s) into the exhaust stream to control NO_x, if the temperature of the exhaust gas to the inlet of the NO_x post-combustion control equipment is greater than or equal to the minimum operating temperature.

- (8) On and after January 1, 2024, the South Coast AQMD permit to operate of the electricity generating unit shall include limitations for duration, mass emissions, and number of startups and shutdowns.
- (e) Notification
- (1) On and after January 1, 2024, an owner or operator of an electricity generating unit shall notify the South Coast AQMD by calling 1-800-CUT-SMOG at least 24 hours prior to a scheduled startup. The notification shall contain the date and time the scheduled startup will begin.
- (f) Recordkeeping
- (1) On and after January 1, 2024, an owner or operator of an electricity generating unit shall maintain the following records on-site for 5 years and make this information available to South Coast AQMD upon request:
 - (A) An operating log for each startup and shutdown, which contains the date, time, duration, and reason for each event;
 - (B) A list of scheduled startups, including date and time of the scheduled startup;
 - (C) Any change(s) to the date and time of a scheduled startup; and
 - (D) NO_x emissions data collected during each startup and shutdown with a certified Continuous Emissions Monitoring System (CEMS) pursuant to subdivision (e) – Monitoring, Recordkeeping, and Reporting in Rule 1135.
 - (2) On and after January 1, 2024, an owner or operator of an electricity generating unit equipped with NO_x post-combustion control equipment shall maintain on-site documentation from the manufacturer of the minimum operating temperature of the NO_x post-combustion control equipment and make this information available to the South Coast AQMD upon request.